

REMARKS

Upon entry of the amendments, claims 1, 2 and 5-18 will be pending in the application. Applicants request reconsideration of the rejections detailed in the Office Action based upon the following comments.

Claim Rejections – 35 U.S.C. § 112

Claim 18 is rejected as indefinite. The claim has been amended to specify that the material of the mold is the transcription face. Clarification of the Examiner's comments regarding the "temperatures should be in units of degrees C" is respectfully requested. The claims currently indicates that the difference between α_a and α_b will be greater than or equal to $50 \times 10^{-7}/^{\circ}\text{C}$.

Claim Rejections – 35 U.S.C. § 102

Claims 1-3, 5, 7, 10 and 18 are rejected as being anticipated by Greschner (US 5,427,599) in view of Kandachi or Yanagisawa.

Applicants respectfully request that the anticipation rejection be withdrawn because the cited patent fails to inherently or explicitly disclose every feature detailed in the claims. Independent claim 1 has been amended to incorporate the features of former claim 3, namely that "the sectional form of the concavo-convex pattern is rectangular".

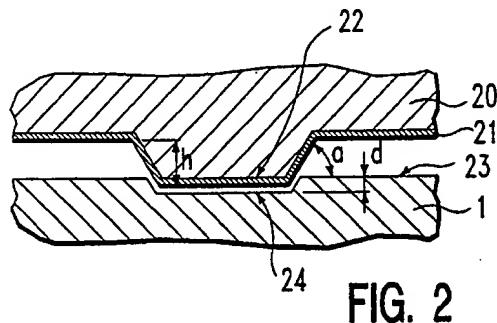
In contrast to the claimed invention, Greschner discloses that the mold will have a triangular or trapezoidal-shaped cross section. Reference is made to column 4, lines 7-21, wherein Greshner explains:

"In order to prevent jamming of stamp and glass substrate during this cooling process, *the invention furthermore*

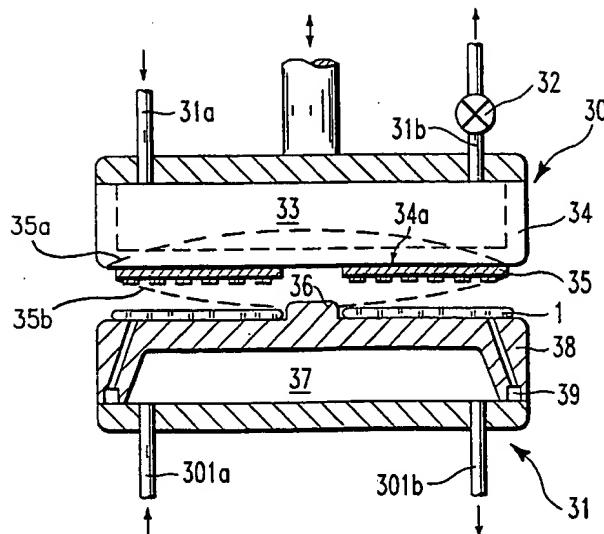
suggests to provide a slight edge slope in the stamp instead of vertical edges, and to increase the height of the stamp structures compared with the depth of the guide structures on the glass substrate made thereby.

FIG. 2 shows a detail of the cross section through stamp 20 with a surface hardening layer 21 and with a stamp relief 22 for a guide track, whose depth d in substrate 1 only amounts to a fraction of height h of the stamp relief 22. *The lateral edges of Stamp relief 22 are inclined and form an angle $50^\circ < \alpha < 90^\circ$ which can be fixed at discretion within wide limits by suitable photolithographic etching steps."*

The trapezoidal cross-section of the Greschner mold/stamp (20) and stamp relief (22) are shown by Figure 2.



Applicants note that Figure 3 arguably depicts a stamp matrix having a concavo-convex pattern that is a rectangular cross-section.



However, Applicants respectfully assert that one skilled in the art would not interpret the schematic representation shown in Figure 3 of Greschner to be in regards of a stamp having a rectangular cross-section. The detailed description regarding Figure 3 fails to explicitly disclose a rectangular cross-section. Furthermore, the patent as a whole details to one skilled in the art that the stamps should have edges deviating from the vertical. For example, reference is made to column 5, line 64 to column 6, line 24 of Greschner. Moreover, part 35 of Greschner is flexible and may not transcribe a reverse pattern of the rectangular concavo-convex pattern to the surface of the base material.

Applicants respectfully submit that at the time of the invention one skilled in the art would expect deformation of a pattern that is transcribed by a transcription face having a rectangular cross section. One would expect that the pattern would be easily influenced by thermal expansion and could be expected to collapse. Reference is made to page 6 of the present application. However, the claimed mold is unexpectedly effective for a micro-shape having a rectangular cross-section on a flat transcription face.

Applicants respectfully submit that amended independent claim 1 is allowable over Greschner. The cited prior art fails to inherently or explicitly depict all of the claimed features, such as the rectangular cross section. Applicants further submit that the rejections of pending claims 2, 5, 7, and 10 should also be withdrawn because these claims depend from independent claim 1, which is not anticipated by Greschner.

Likewise, Applicants respectfully submit that the rejection of independent claim 18 should be withdrawn. This claim has been amended in a similar fashion as independent claim 1. As discussed above, the cited prior art fails to inherently or explicitly depict the rectangular cross section.

Claim Rejections – 35 U.S.C. § 103

Claims 1-3 and 5-18 are rejected as obvious based upon Greschner in view of Kandachi, Yanagisawa, or European Patent Application 860,720.

Applicants have amended independent claims 1, 9 and 18 to incorporate the features of former defendant claim 3. Applicants submit that these claims would not be considered anticipated or obvious in view of Greschner. Furthermore, the secondary references fail to remedy the deficiencies of Greschner. As set forth in the Office Action, the alleged secondary references merely provide information concerning the thermal expansion coefficient of soda-lime-glass.

Applicants also question the reasoning behind the rejection of claim 6. The Examiner notes in a previous Office Action that Greschner teaches a depth of approximately 0.6 μm . The Examiner asserts that the “1 μm or more” limitation in claim 6 would be an obvious modification. However, the Examiner has not established that this

limitation is a result-effective variable requiring only routine experimentation. Furthermore, the Examiner has not referenced any other piece of prior art that teaches this limitation. A proper obviousness rejection should not be based on unknown authority.

Due to the foregoing, Applicants assert that the rejections should be withdrawn because pending claims 1, 2 and 5-18 are not obvious in view of the cited prior art.

CONCLUSION

Applicants respectfully requests that a timely Notice of Allowance be issued in this case. If any additional fees are due in connection with the filing of this response, such as fees under 37 C.F.R. §§ 1.16 or 1.17, please charge the fees to Deposit Account No. 02-4300. Any overpayment can be credited to Deposit Account No. 02-4300.

Respectfully submitted,

Date: July 22, 2003

Signature:



Michael A. Makuch, Reg. No. 32,263
Smith, Gambrell & Russell, L.L.P.
1850 M Street, N.W., Suite 800
Washington, D.C. 20036
Telephone: (202) 263-4300

SGRDC/I99723.1